Claims

What is claimed is:

1. A system to facilitate flying in a degraded visual environment, comprising:

a suite of sensors for receiving environmental information;

a central processing unit that combines the environmental information received from the sensors with mission-specific information; and

an output from the central processing unit that assists an operator fly a vertical take-off and landing (VTOL) capable vehicle in close proximity to terrain.

2. A system according to claim 1, wherein the suite of sensors also gathers aircraft state data and supplies that data to the central processing unit.

3. A system according to claim 1, wherein the output is visual indicators that inform the operator of unsafe landing areas.

4. A system according to claim 1, wherein a processor fuses the environmental information with other information and causes the VTOL capable vehicle to avoid obstacles.

5. A method for enhancing situational awareness in a degraded environment comprising the steps of:

receiving environmental information via a suite of sensors;

filtering the environmental information and other data;

combining the environmental information received from the sensors with mission-specific information in a least one processing unit; and

creating a display for integrating visual and symbology cues for a pilot.

6. A method for enhancing situational awareness in a degraded environment comprising the steps of:

receiving environmental information via a suite of sensors;

combining the environmental information received from the sensors with mission-specific information in a least one processing unit;

using an output of at least one processing unit to manipulate a rotorcraft in close proximity to terrain; and

providing visual indicators to an operator of a rotorcraft while the rotorcraft is in close proximity to terrain

7. The method according to claim 6 wherein the method further comprises the step of fusing visual data with forward-looking infrared radar (FLIR) data;

8. The method according to claim 7, wherein the method further comprises the step of collecting and utilizing obstacle avoidance radar data.

9. The method according to claim 7, wherein the method further comprises the step of collecting and utilizing data from an ultra-wide band microwave radar.

10. The method according to claim 9 wherein the method further comprises the step of combining environmental information with an obstacle and terrain database.